



SPDT PIN Diode Switch Operating from 800 MHz to 3 GHz up to 75 Watts (+48.75 dBm) and N Type

PIN Diode Switches Technical Data Sheet

PE71S8006

Features

- Single Pole Double Throw (SPDT) High Power PIN Diode Switch
- Frequency Range 800 MHz to 3 GHz
- Reflective Design
- TTL Control Logic
- Cold Switching up to 75 Watts Average Power
- Hot Switching up to 30 Watts Average Power
- Insertion Loss 0.75 dB
- Isolation 70 dB
- VSWR < 1.4:1
- Switching Speed 6 microseconds typ
- Operating Voltages +15 Vdc @ 80 mA and +5 Vdc @ 40 mA typ
- 50 Ohm Design
- -20°C to +70°C Operating Temperature
- N-Type Female Connectors
- Solder Pins for DC and TTL Control
- Rugged Mil Grade Package Design

Applications

- Military & Commercial Communication Systems
- Microwave Radio Systems
- Radar Systems
- Test & Measurement
- Research & Development
- RF Wideband Front Ends

Description

The PE71S8006 is a Single Pole Double Throw (SPDT) High Power PIN Diode Switch that operates over the frequency range of 800 MHz to 3 GHz. The 50 ohm reflective design supports TTL control logic and is rated for cold switching up to 75 watts average power and hot switching up to 30 watts average power. Impressive typical performance includes 0.75 dB insertion loss, 70 dB isolation, 6 microsecond switching speed, and < 1.4:1 VSWR. Operating voltages are +15Vdc @ 80 mA nominal and +5 Vdc @ 40 mA nominal. The rugged Mil Grade package design supports N type female connectors, and solder pins for DC and TTL control logic. The operational temperature range is -20°C to +70°C.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units	TTL Control
					Switch Type
Frequency Range	0.8		3	GHz	TTL Low
Impedance		50		Ohms	TTL High
VSWR		1.3:1	1.4:1		COM-J1
Operating Temperature	-20		+70	deg C	COM J-2
					SPDT

Electrical Specification Notes:

*Note: Spurious Noise is to be tested with the common port with J1 and J2 terminated into 50 ohms

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT PIN Diode Switch Operating from 800 MHz to 3 GHz up to 75 Watts \(+48.75 dBm\) and N Type PE71S8006](#)



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Descripton	Minimum	Typical	Maximum	Units
Average Cold Switched (-20°C to +50°C)			75	Watts
Average Cold Switched (+50° to +70°C)			50	Watts
Average Hot Switched (-20°C to +70°C)			30	Watts
Switching Time (50% TTL to 10% or 90% RF)		6	10	us
DC Voltage		+15		Vdc
DC Current		80		mA
DC Voltage		+5		Vdc
DC Current		40		mA
Isolation (800-2000 MHz)		75	65	dB
Isolation (2000-3000 MHz)		65	55	dB
Insertion Loss (800-2000 MHz)		0.6	1	dB
Insertion Loss (2000-3000 MHz)		0.9	1.3	dB
Spurious Noise (Out-of-Band) (100-800 MHz)*		< -73		dBm
Spurious Noise (1-100 MHz)*		< -50		dBm

Mechanical Specifications

Size

Weight	0.75 lbs [340.19 g]
Design	SPDT
RF Connector	SMA Female
TTL Control Connector	Solder Pin

Environmental Specifications

Temperature

Operating Range	-20 to +70 deg C
Storage Range	-55 to +85 deg C

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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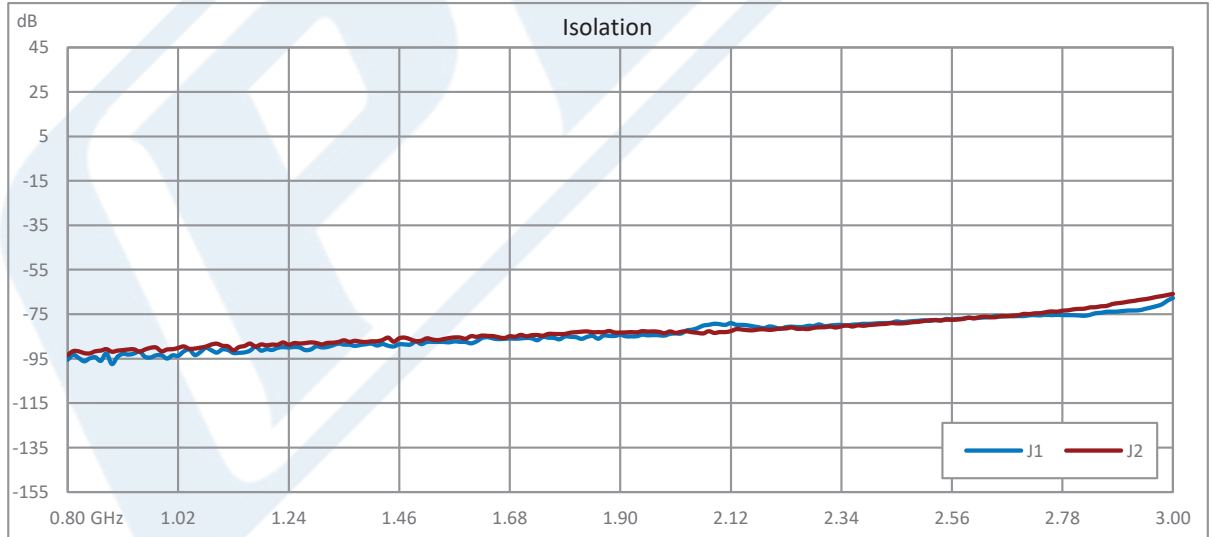
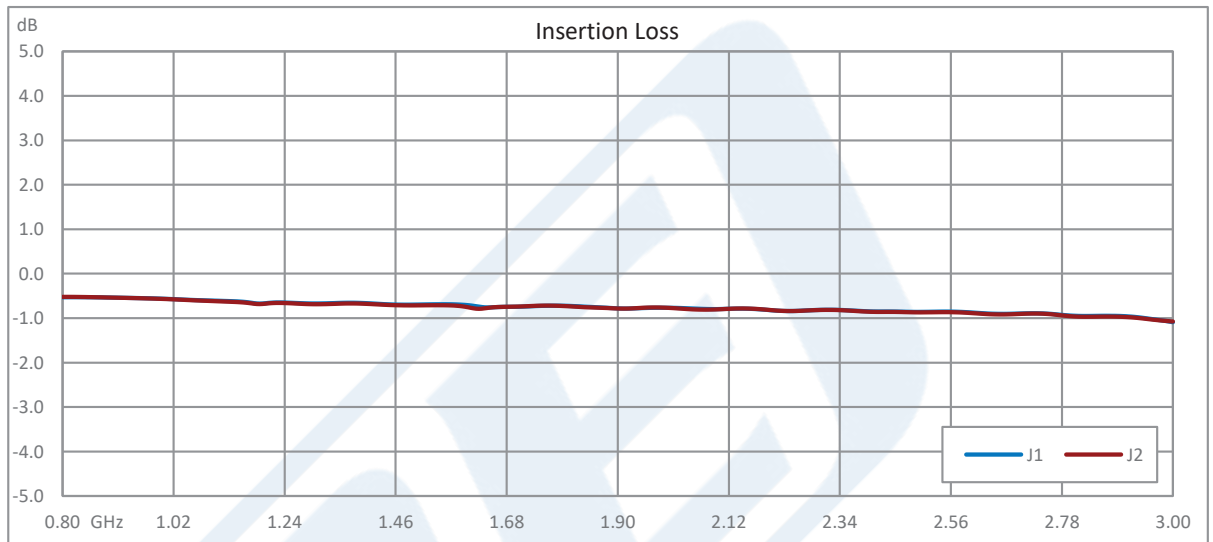


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Typical Performance Data



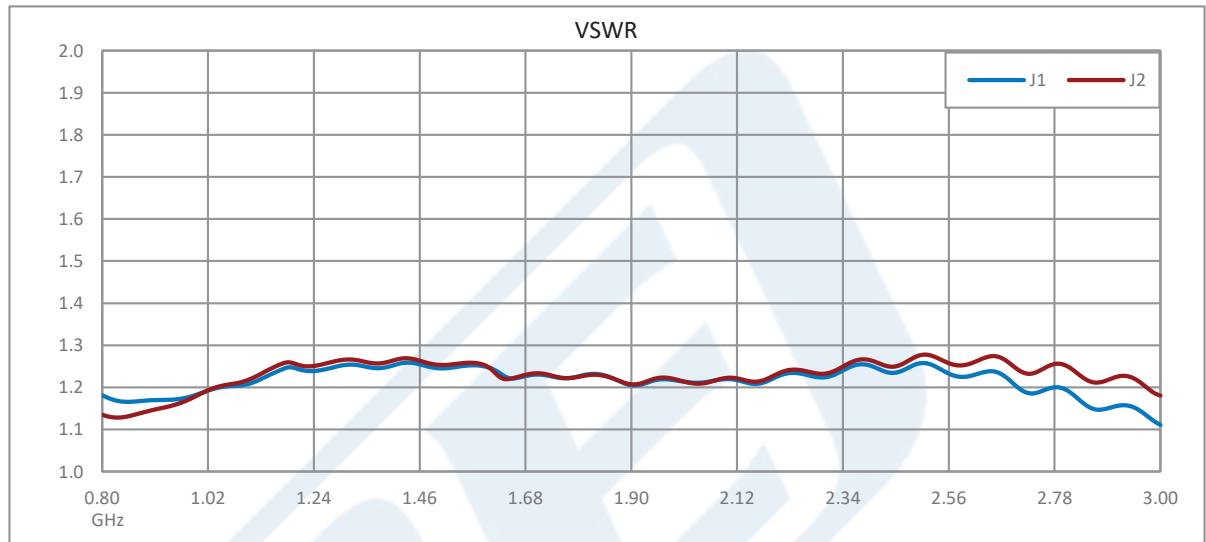
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SPDT PIN Diode Switch Operating from 800 MHz to 3 GHz up to 75 Watts (+48.75 dBm) and N Type from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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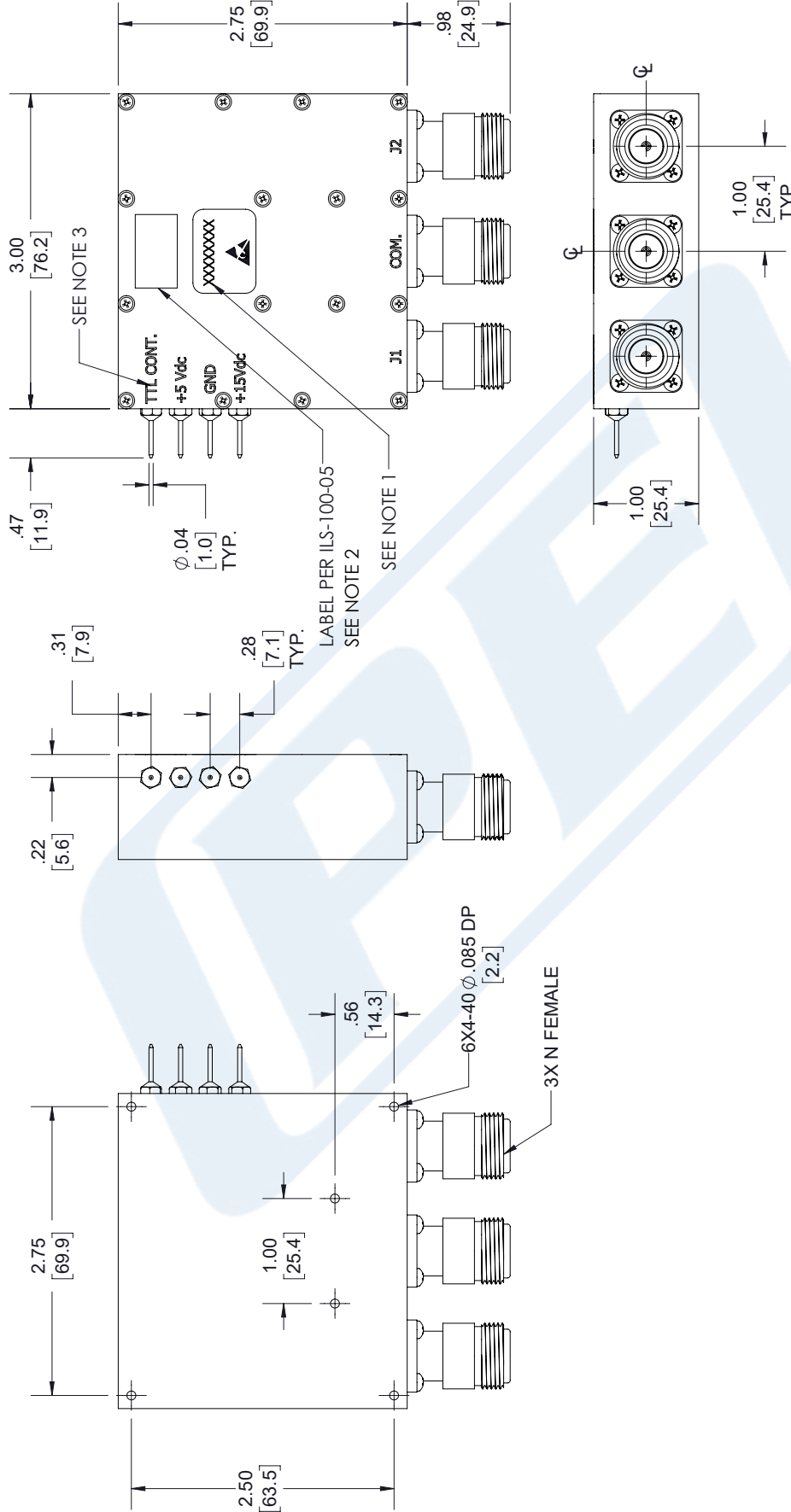
URL: <https://www.pasternack.com/spdt-electromechanical-relay-switch-accessory-pwb-3-ghz-15v-sma-pe71s8006-p.aspx>

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PE71S8006 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	14-08-2021	TGALLA



PE PASTERNAK
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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X = ±.2	[5.08]	FRACTIONS
.XX = ±.02	[.51]	±.1/32
.XXX = ±.005	[.13]	ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12	[305]	= +1 [25] / -0
12 [305] < L ≤ 60	[1524]	= +2 [51] / -0
60 [1524] < L ≤ 120	[3048]	= +4 [102] / -0
120 [3048] < L ≤ 300	[7620]	= +6 [152] / -0
300 [7620] < L =	+59%	/ -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE [CAGE CODE] DRAWN BY ITEM NO.

A 53919 MVEERAPPAN PE71S8006

NOTES:

- SERIAL NUMBER AND DATE CODE ARE COMBINED. EX: 202008280001.
- LABEL PER ILS-100-05. FOR INTERNAL REFERENCE ONLY. LABEL LOCATION SHOULD BE SAME AS SHOWN.
- TTL LOW= COMMON TO J1, TTL HIGH= COMMON TO J2

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